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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,409	12/28/2000	Herman Kwong	57983.000029	5256

7590 10/22/2002
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EXAMINER

ALCALA, JOSE H

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,409

Applicant(s)

KWONG ET AL.

Examiner

Jose H Alcalá

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 25-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18, 20, 22-24 and 28-30 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 19 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 28 June 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This Final action is in response to amendment filed on 6/28/02.

Election/Restrictions

2. Applicant's election with traverse of Gropup II in Paper No. 5 is acknowledged. The traversal is on the ground(s) that the proposed process would not result in the claimed product, and gives the example that it is not possible to insert an adhesive into a hole that is not yet made. This is not found persuasive because as pointed out in the last office action, the process clearly establishes the steps of: **"forming an opening in each (circuit board) and then applying an adhesive to join the boards"**. Therefore, it is clear that the opening or hole is made prior to the inserting of the adhesive.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 6/28/02 have been disapproved. Even though the correction to the drawings correct some of the objections, such as the correction to Figure 1A with the inclusion of the "Prior Art" label, the proposed corrections have not been approved because the cross-hatching patterns have not been fixed. Therefore all the objection to the drawings are still maintained. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

4. Figures are improperly crosshatched. All of the parts shown in the section, and only those parts, must be crosshatched. For example figure 2B, is showing conductive elements (reference numbers 26 and 27) and a dielectric material, these elements need to be shown with the proper crosshatching patterns. Another example is figure 2A, the reference number 20 is showing a cross-section but the cross-hatching pattern is not shown. A further example is Figure 8, which is shown in cross-section, and needs to have the correct cross-hatching patterns. The crosshatching patterns should be selected from those shown on page 600-81 of the MPEP based on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02.

5. Figure 1A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. It is suggested that the labels of Figures 1, 2A and 2B, be changed to --Prior Art --, in order to avoid any confusion with the labels. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Reference number 10 is not in Figure 1. Reference numbers 100 and 102 are not in Figures 6 and 7. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Reference numbers 28b in Figure 3A. In addition, Reference numbers 202, 106a, 106d and 200 are not mentioned in the Specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 19,21,22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "the first signal conductor" in line 1. In addition, the claim recites the limitation "the second signal conductor" in line 2, and the limitation "the ground plane layers" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the exact

location of the third signal conducting means in the first circuit board, and the exact location of the fourth signal conducting means in the second circuit board.

Allowable Subject Matter

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach, disclose, or suggest, either alone or in combination, at least on claims 13 and 28, a first and second circuit boards each having a signal conducting means formed therein, the signal conducting means being shielded by an electrically conductive shield, the electrically conductive shield having an opening formed therein so as to expose the signal conducting means in the circuit board, an electrically conductive material surrounding at least one of the openings and within at least one of the openings; wherein a first circuit board and a second circuit board are electrically interconnected by the electrically conductive material such that the first opening and the second opening are aligned and a signal propagating along the first signal conducting means is electrically interconnected to the second signal conducting means.

11. Claims 19 and 21, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.


Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose H Alcala whose telephone number is (703) 305-9844. The examiner can normally be reached on Monday to Friday.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JHA
October 20, 2002


ALBERT W. PALADINI
PRIMARY EXAMINER